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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,939	10/30/2003	Akihiro Miyauchi	520.43241X00	6291
20457 7590 05/30/2008 ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873				
EXAMINER HYUN, PAUL SANG HWA				
ART UNIT 1797		PAPER NUMBER		
MAIL DATE 05/30/2008		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/695,939

**Applicant(s)**

MIYAUCHI ET AL.

**Examiner**

PAUL S. HYUN

**Art Unit**

1797

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-11-13, 16 and 27-31 is/are pending in the application.
- 4a) Of the above claim(s) 9, 16, 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-13 and 28-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 29 April 2008 has been entered.

Claims 9, 11-13, 16 and 27-31 are currently pending with claims 9, 16 and 27 being withdrawn. In summary, claims 11-13 and 28-31 will be examined on the merits. However, claim 16 is subject to rejoinder upon the allowance of claim 13.

The claim objection and the rejection under 35 U.S.C. section 112 have been withdrawn in light of the cancellation of the claims.

Despite the amendments, the art rejection is maintained.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims **11-13 and 28-31** are rejected under 35 U.S.C. 102(e) as being anticipated by Agrawal et al. (US 7,195,872 B2).

Agrawal et al. disclose a substrate comprising a textured surface for conducting chemical and biological reactions. The textured surface is defined by microfeatures, which increase surface area for conducting reactions (see Abstract). The microfeatures can be integral with the substrate or be made from a material different from the substrate (see lines 10-17, col. 17). The substrate and the microfeatures can be a thermoplastic organic polymer such as polyethylene, polystyrene and PTFE, which is inherently hydrophobic (see lines 17-35, col. 12) or a metal (see lines 50-65, col. 4). The shape of the microfeatures can be a cone, a pillar, or a wall (see lines 55-60, col. 4). The microfeatures that form the textured surface can have an aspect ratio less than 10. Specifically, the microfeatures can comprise heights between 0.1 to 100 microns and cross-sections between 0.01 to 500 sq. microns (i.e. about 0.035 microns to 25 microns in diameter if the shape of the microfeature is cylindrical), and the spacing between the microfeatures can be equivalent to the cross-sectional dimensions of the microfeatures, which can range from about 0.035 to about 25 microns if the shape of the microfeature is cylindrical (see lines 18-22, col. 19). The microfeatures can be modified by a coating (see lines 39-67, col. 28), or functionalized with biomolecules such as nucleic acid and peptides to facilitate reactions (see lines 47-65, col. 5). In one embodiment, two substrates 901 and 902 are sandwiched, forming a flow path therebetween (see Example 13, col. 54).

### ***Response to Arguments***

Applicant's arguments with respect to the art rejection have been fully considered but they are not persuasive.

Applicant argues that Agrawal et al. do not disclose a structure wherein the tips of the microfeatures contact a second substrate. Although Figure 9 of the reference supports Applicant's argument, the argument is not persuasive because Example 13 of the reference comprises two substrates sandwiched together wherein the textured surfaces of the substrates contact one another (see lines 16-19, col. 54). It should be noted that the "textured surface" according to the reference can comprise microstructures or microfeatures (see Abstract), wherein the microstructures or microfeatures can comprise various shapes described above (see lines 29-41, col. 16).

Applicant also argues that Agrawal et al. do not disclose an embodiment comprising a flow path. This argument is not persuasive because Example 13 of the reference comprises a fluid channel for conducting hybridization reactions. The Examiner maintains the position that the fluid channel of Example 13 disclosed by Agrawal et al. constitutes a flow path.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL S. HYUN whose telephone number is (571)272-8559. The examiner can normally be reached on Monday-Friday 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jill Warden/  
Supervisory Patent Examiner, Art Unit 1797

/Paul S Hyun/  
Examiner, Art Unit 1797